



DEPARTMENT OF THE NAVY  
NAVAL TRAINING CENTER  
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GREAT LAKES, ILLINOIS 60088-5000

NTCGLAKESINST 5090.3A  
N45

SEP 22 1990

NTC GREAT LAKES INSTRUCTION 5090.3A

From: Commander, Naval Training Center, Great Lakes

Subj: UNDERGROUND STORAGE TANK (UST) MANAGEMENT PLAN

Ref: (a) OPNAVINST 5090.1B, Environmental and Natural Resources Protection Manual  
(b) Code of Federal Regulations, Title 40, Parts 280, 281  
(c) Hazardous Waste and Solid Waste Amendments (HWSA) of 1984, Subtitle I, to the Solid Waste Disposal Act (SWDA) of 1965  
(d) Code of Federal Regulations, Title 29, Part 1910, Section 106; Flammable and Combustible Liquids, 1 July 1988  
(e) Code of Federal Regulations, Title 40, Part 110, Section 5  
(f) Code of Federal Regulations, Title 40, Part 112, Section 7  
(g) State of Illinois, Office of State Fire Marshal, Title 41, Fire Protection, Parts 170 and 180  
(h) Illinois Environmental Protection Agency, Environmental Protection Act, Title V; Land Pollution and Refuse Disposal; Sections 20 through 22, January 1989

Encl: (1) Underground Storage Tank (UST) Management Plan - 1998

1. Purpose. To promulgate and establish local procedures for managing the operation, maintenance, and future programming requirements for all existing and new Underground Storage Tanks (USTs) located at all commands and activities within the Naval Training Center (NTC), Great Lakes complex.

2. Cancellation. NTCGLAKESINST 5090.3. This instruction has been substantially revised and should be reviewed in it's entirety.

3. Background. Reference (a) requires Commanders/Commanding Officers to comply with United States Environmental Protection Agency (USEPA) regulations, as well as state and local environmental laws while operating USTs at NTC, Great Lakes. References (b) through (h) amplify requirements governing USTs.

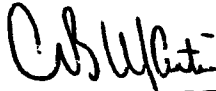


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4. Policy. NTC, Great Lakes has the responsibility to actively protect and enhance the quality of the environment through adherence with all applicable regulatory requirements. This includes initiating actions to promote the prevention of soil and groundwater contamination and evaluation of any potential for leaks from the UST and its associated equipment.

5. Action. Actions required by all NTC, Great Lakes Staff, component commands and tenant commands are detailed in enclosure (1).



C. B. MARTIN  
Chief of Staff, Operations

Distribution:  
NTCGLAKESINST 5216.5M  
LIST IIA, II (CASE B), B, C

NTCGLAKESINST 5090.3A

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**UNDERGROUND STORAGE TANKS MANAGEMENT PLAN**

**NAVAL TRAINING CENTER**

**GREAT LAKES, ILLINOIS**

**CONTACT**

**COMMANDER, NAVAL TRAINING CENTER**

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**1998**

**ENCLOSURE (1)**

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1. INTRODUCTION

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## II. NAVAL TRAINING CENTER, GREAT LAKES - MISSION

The mission of NTC, Great Lakes is to exercise command over and coordinate the efforts of the assigned subordinate activities in effecting basic indoctrination for enlisted personnel and initial skill, advanced and/or other specialized training for officer and enlisted personnel of the Navy. The assigned subordinate activities and brief description of each subordinate's mission are as follows.

### 1. RECRUIT TRAINING COMMAND, GREAT LAKES:

To conduct a training program which will: Effect a smooth transition from civilian to Navy life; provide the recruit with knowledge and skills which are basic to all Naval personnel; provide Department of the Navy with personnel possessing an effective level of physical fitness.

### 2. SERVICE SCHOOL COMMAND, GREAT LAKES:

To provide training for officer and enlisted personnel in order to prepare them for early usefulness in their designated specialties and to supplement training afloat by providing personnel advance and/or specialized training when such training can be more advantageously given ashore.

### 3. NAVY PUBLIC WORKS CENTER, GREAT LAKES:

The mission of the Navy Public Works Center, Great Lakes, is to provide public works, public utilities, public housing, transportation support, engineering services, shore facilities planning support and other incidental logistic support of a public works nature required by the operating forces, dependent activities and other commands served by the Navy Public Works Center.

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4. NAVAL HOSPITAL, GREAT LAKES:

The Naval Hospital provides comprehensive inpatient, outpatient, and emergency services. The Naval Hospital ensures proper contingency training for the hospital staff and maintains personnel and material readiness. The command provides health care and services to operating forces and shore activities of the Navy and Marine Corp. It also services other beneficiaries, subject to current space and resources. The Naval Hospital ensures military and health care for hospital staff and beneficiaries. The command maintains disaster preparedness plans and ensures JCAHO accreditation.

5. Scope:

This plan identifies resource needs in terms of equipment, facilities, and personnel and provides operational procedures for implementing a compliance-oriented UST Management Plan for all commands and activities within the NTC, Great Lakes complex.

6. Authority:

The UST Management Plan for NTC, Great Lakes complex is prepared in accordance with OPNAVINST 5090.1A.

7. Specific Responsibilities:

Responsibilities for the UST Management Program within NTC, Great Lakes are:

a. ACOS Installation and Environment, Naval Training Center:

(1) Maintains UST operating records from tenant and component commands and reports required by the USEPA.

(2) Maintains liaison with IEPA on all matters concerning environmental protection and underground storage tanks.

(3) Assists in UST inspection programs for commands at NTC, Great Lakes.

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(4) Oversees tenant and component commands in UST training for operators of USTs and ancillary equipment.

b. NTC, Great Lakes Safety Officer

(1) Assists in UST inspection program for commands at NTC, Great Lakes.

(2) Maintains liaison and assists PWC, Great Lakes and NTC, Great Lakes in accomplishing joint UST taskings.

(3) Assists NTC, Great Lakes Environmental Dept. in maintaining liaison with EPA on all matters concerning environmental safety for USTs.

(4) Assists tenant and component commands in UST safety training for operators.

c. Activity Commands Operating and Maintaining UST Systems

(1) Assigns Activity Command Environmental Coordinators the responsibility of conducting Storage Tank Surveys (Appendix G), maintaining operating records and associated documentation for all underground storage tanks and forwards copies to NTC, Great Lakes Environmental Department, Code N45, for required reporting actions.

(2) Ensures ongoing training for personnel operating and maintaining USTs.

d. Activity Command Environmental Coordinators

(1) Inspects command buildings and associated exterior sites for UST system spills, leaks or other deteriorating conditions and forwards reports to NTC, Great Lakes Environmental Department (N45), for required reporting actions.

(2) Provides/assists ongoing training, both classroom and on-the-job, for personnel operating and maintaining USTs. Maintains records for the commands and reports training completed to the NTC, Great Lakes Environmental Department, (N45.)

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(3) Acts as point of contact for UST inspections from regulatory agencies, NTC, Great Lakes Environmental Department, Code N45, and NTC, Great Lakes Safety Officer, providing data requested.

#### H. Glossary of Terminology

Above ground Release - Any release to the surface of land or water, including releases from the above ground portion of an UST system and above ground releases associated with overfills and transfer operations as the regulated substance moves to or from an UST system.

Ancillary Equipment - Any devices, including, but not limited to, fittings, flanges, valves and pumps used to distribute, meter or control the flow of regulated substances to and from an UST.

Below ground Release - Any release to the subsurface of the land and to groundwater, including releases from the below ground portion of an UST system and below ground releases associated with overfills and transfer operations as the regulated substance moves to or from an UST.

Cathodic Protection - Technique to prevent corrosion of a metal surface through the application of either galvanic anodes or impressed current.

Cathodic Protection Tester - Person who understands principles and measurement methods of cathodic protection systems as applied to buried or submerged metal piping and tank systems. At a minimum, such persons must have education and experience in soil resistivity, stray current, structure-to-soil potential and component electrical isolation measurement of buried metal piping and tank systems.

(CERCLA) - Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended.

Compatible - The ability of two or more substances to maintain their respective physical and chemical properties upon contact with one another for the design life of the tank system under conditions likely to be encountered in the UST.

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Connected Piping - All underground piping including valves, elbows, joints, flanges, and flexible connectors attached to the tank system, through which regulated substances flow. For the purpose of determining how much piping is connected to any individual UST system, the piping that joins the two UST systems should be allocated equally between them.

Consumptive Use - Consumed on the premises.

Corrosion Expert - An accredited or certified person or registered engineer who has a certificate or license, qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks.

Dielectric Material - A material that does not conduct direct electric current. Dielectric coatings are used to electrically isolate UST systems from the surrounding soils. Dielectric bushings are used to electrically isolate portions of the UST system (i.e., tank from piping).

Excavation Zone - The volume containing the tank system and backfill material bounded by the ground surface, walls and flow of the pit and trenches into which the UST is placed at time of installation.

Existing Tank System - A tank system used to contain an accumulation of regulated substances or for which installation has commenced on or before 22 December 1988. Installation is considered to have commenced if:

1. The owner or operator has obtained all federal, state and local approvals or permits necessary to begin physical construction of the site or installation of the tank system; and if:
  - a. Either a continuous on-site physical construction or installation program has begun; or
  - b. The owner or operator has entered into a contractual obligation, which cannot be canceled or modified without

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substantial loss, for physical construction at the site or installation of the tank system to be completed within a reasonable time.

Flow-Through Process Tank - A tank that forms an integral part of a production process through which there is a steady, variable, recurring or intermittent flow of materials during the operation of the process. Flow-through process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process.

Free Product - A regulated substance that is present as a non-aqueous phase liquid (e.g., liquid not dissolved in water).

Hazardous Substance UST System - A UST system that contains a hazardous substance defined in section 101 (14) of the CERCLA of 1980 (but not including any substance regulated as a hazardous waste under subtitle C or any mixture of such substances and petroleum, and which is not a petroleum UST system.

Heating Oil - Petroleum that is No. 1, No. 2, No. 4-light, No. 4-heavy, No. 5-light, No. 5-heavy and No. 6 technical grades of fuel oil; other residual fuel oils (including Navy Special Fuel Oil and Bunker C); and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers or furnaces.

Implementing Agency - EPA, or, in the case of a state with a program approved under section 9004 (or pursuant to a memorandum of agreement with EPA), the designated state or local agency responsible for carrying out an approved UST program.

Motor Fuel - Petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any grade of gasohol, and is typically used in the operation of a motor vehicle.

New Tank System - Tank system containing regulated substances and installed after 22 December 1988.

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Oil - Defined in 40 CFR 122.2 as oil of any kind or in any form, including but not limited to, petroleum, fuel oil, sludge or oil refuse.

On the Premises Where Stored - UST systems located on the same property where the stored heating oil is used.

Operational Life - Period beginning when installation of the tank system has commenced until the time the tank system is properly closed per requirements of all federal, state and local codes.

Operator - Person in control of or having responsibility for the daily operation of the UST system.

Overfill Release - Release occurring when tank is filled beyond capacity, resulting in discharge of the regulated substance into the environment.

Owner - Any person who owns an UST system used for storage, use or dispensing of regulated substances, or discontinued its use.

Petroleum UST System - UST System that contains petroleum or a mixture of petroleum, with de minimis quantities of any other regulated substances including motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents and used oils.

Recoverable Product - Product which has served its intended purpose or which contains foreign matter rendering it unfit for original or alternate use, but through processing or refining can be reclaimed for other use by the Navy or commercial industry.

Regulated Substance - Any substance defined in section 101 (14) of the CERCLA of 1980 (but not including any substance regulated as a hazardous waste under Subtitle (C) and petroleum products as defined in 40 CFR 280.12.

Release - Any spilling, leaking, emitting, discharging, escaping, leaching, or disposing from an UST system into groundwater, surface water, or subsurface soils.

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Release Detection - Determining whether a release of a regulated substance has occurred from the UST system into the environment or into the interstitial space between the UST and its secondary barrier or secondary containment around it.

SARA - Superfund Amendments and Reauthorization Act of 1986.

Tank - A stationary device designed to contain an accumulation of regulated substances and constructed of non-earth materials (e.g., concrete, steel, plastic) that provide structural support.

Underground Area - Underground room, such as a basement, cellar, shaft or vault, providing enough space for physical inspection of the exterior of the tank situated on or above the surface of the floor.

Underground Storage Tank (UST) - Any one or a combination of tanks including underground piping, used to contain an accumulation of regulated substances, and the volume of which, including tanks and piping, is 10 percent or more beneath the surface of the ground. This term does not include any:

1. Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for non-commercial purposes.
2. Tanks used for storing heating oil for consumptive use at the premises where stored.
3. Septic tanks.
4. Pipeline facility (including gathering lines) which are regulated by other Acts.
5. Surface impoundment, pit, pond or lagoon.
6. Storm-water or waste-water collection system.
7. Flow-thru process tank.
8. Liquid trap or associated gathering lines directly related to gas or oil production and gathering operations; or

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9. Storage tank situated in an underground area if the storage tank is situated upon or above the floor.

Upgrade - The addition of or retrofit of some systems such as cathodic protection, lining, or spill and overfill controls to improve the ability of an underground storage tank system to prevent the release of product.

UST System or Tank System - UST, connected underground piping, underground ancillary equipment and containment system, if any.

Waste Water Treatment Tank - Tank designed to receive and treat a influent wastewater through physical, chemical or biological methods.

### III. Underground Storage Tank (UST) Regulations:

In accordance with Chief of Naval Operations (CNO) policy letter of 13 November 1985, the UST Management system at NTC, Great Lakes must comply with all applicable federal, state and local regulations.

#### A. Federal Regulations

1. Hazardous Waste and Solid Waste Amendments (HWSA) of 1984, Subtitle 1, to the Solid Waste Disposal Act (SWDA) of 1965. These amendments establish a national regulatory program for managing USTs containing hazardous materials, including petroleum products.

2. United States Environmental Protection Agency (USEPA), Code of Federal Regulations, Title 40, Part 280: Technical Standards and Corrective Action Requirements for Owners and Operators of USTs. This regulation establishes standards for installation and certification of all new and existing UST systems.

3. USEPA Code of Federal Regulations, Title 40, Part 281: Approval of State UST programs. This regulation establishes requirements that the State of Illinois must meet to have a federally approved UST program.

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4. Occupational Safety and Health Standard (OSHA), Code of Federal Regulations, Title 29, Part 1910, Section 106: Flammable and Combustible Liquids. Section 106(b)(7)(iii) requires hydrostatic testing of USTs and connections before using the system for storage of flammable or combustible liquids.

5. USEPA Code of Federal Regulations, Title 40, Part 110, Section 5. Section 5 prohibits discharge of any old and hazardous substance into United States navigable waters. A leak from an underground tank may violate this regulation.

6. USEPA, Code of Federal Regulations, Title 40, Section 7(e)(2)iv regulates pressure testing of underground tanks.

7. HWSA of 1984, Subtitle I, to the SWDA of 1965 establishes a national regulatory program for managing USTs containing hazardous materials, especially petroleum products.

8. Superfunds Amendment and Reauthorization Act (SARA), Section 205 of 1986 defines petroleum, state UST inventories, financial responsibility for UST owners, EPA/State authority for corrective actions and remedial actions, and state/political subdivision right to adopt/enforce more stringent requirements than Federal requirements.

9. Resource Conservation and Recovery Act (RCRA), Subtitle C, Section 9003 requires EPA to establish standards for release detection, prevention, corrective action and financial responsibility associated with releases from all USTs containing regulated substances.

10. RCRA, Subtitle C, Section 9007 requires that all agencies of the Federal government that have jurisdiction over any UST must comply with all Federal, State, interstate and local UST requirements. This means no agency is immune to the regulations set forth in RCRA.

#### **B. State Regulations**

1. State of Illinois, Office of State Fire Marshal, Title 41, Fire Protection, Part 170: Storage, Transportation, Sale and Use

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of Petroleum and other regulated substances. . This notice of emergency amendments incorporates regulations for registration, abandonment, testing and installation of underground tanks.

2. State of Illinois, Office of State Fire Marshal, Title 41, Fire Protection, Part 180: Storage, Transportation and use of Gasoline and Volatile Oils. This notice of emergency amendments incorporates regulations for storage requirements in facilities and vessels of gasoline and oils.

3. IEPA, Environmental Protection Act, Title V; Land Pollution and Refuse Disposal; Sections 20 through 22. This act incorporates state regulations for permitting, notification and operation of USTs.

### C. NTCGLAKES Requirements

1. NTC Environmental Department, Great Lakes (N45), shall assign facility numbers and maintain an inventory database for all USTs, and coordinate with PWC, Great Lakes, and other tank property owners.

2. Tank property owners shall provide tank status updates of: upgrades, removals, new installations, and change-in-services for operated tanks to NTC Environmental Dept., (N45) Great Lakes.

3. UST operators shall provide a quarterly update of information in the UST inventory and UST Plan of Action to NTC Environmental Dept. (N45).

4. UST operators shall coordinate the planning, funding, and corrective action of projects in the Plan of Action with NTC Environmental Dept. (N45).

5. Owners of UST systems shall plan and budget for recurring tank testing, system maintenance, system repair, and tank replacement. Owners shall submit Pollution Control Reports, via the chain of command, with copies to NTC Environmental Dept., for UST system upgrades, removals, and site remediation projects.

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6. PWCGLAKES shall maintain drawings and specifications for tank installation and removal designs performed by PWCGLAKES.

7. Users of UST systems owned by NTC, Great Lakes shall coordinate budget requirements, UST system testing, maintenance, repair, and replacement with NTC Environmental Dept. (N45).

8. Owners of UST systems shall provide copies of all construction and removal permits, air emission permits and annual emission reports, registration and change-in-service notifications, suspected release reports, corrective action correspondence, and construction drawings and specifications to NTC Environmental Dept. (N45), for inclusion into command database records.

#### **D. Registration Requirements**

The Federal Register of 8 November 1985 (50 FR 46612, 40 CFR 280.3) required registration of regulated USTs by 8 May 1986. Regulated USTs are those meeting the definition of "USTank" as identified in paragraph h above. Some tanks meeting the definition of an UST are specifically excluded from regulation in 40 CFR 280.10. These tanks include the following:

1. Hazardous Waste USTs.
2. Waste water treatment tanks that are part of a facility regulated under the Clean Water Act.
3. Equipment or machinery, such as hydraulic lift tanks or electrical equipment.
4. Any UST with a capacity of 110 gallons or less.
5. USTs containing De Minimus concentrations of a regulated substance.
6. Emergency spill or overflow containment UST that is expeditiously emptied after use.

In addition, some USTs are deferred from all regulations, except the spill response regulations of 40 CFR 280, Subpart F. These tanks include the following:

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- a. Waste water treatment tanks.
- b. USTs that were field constructed.

Registration forms for NTC, Great Lakes USTs were submitted by the Commander, NTC, Great Lakes, Commanding Officer, NPW, Great Lakes and Commanding Officer, Naval Hospital, Great Lakes. A complete listing of all USTs within the NTC, Great Lakes complex is shown in Appendix A.

Updated registration notifications must be submitted to the State Fire Marshall when tanks are removed, upgraded, change-in-service, or any tank data changes. Notification forms are provided as Appendix B. Notifications shall be submitted to state by UST property holder, with copies provided to the NTC Environmental Office (N45).

The Resource Conservation and Recovery Act, Section 9002, requires that NTC, Great Lakes notify the IEPA of all USTs that have been used to store regulated substances since 1 January 1974, that are in the ground as of 8 May 1986 or brought into use as of May 1986 on IEPA form 7530.

#### **E. Release Detection Requirements**

The current EPA regulations include requirements for monitoring regulated USTs and their piping for releases. Various options are available including both automatic and manual methods. Release detection is not currently required for USTs supplying emergency generators (40 CFR 280.10(d)).

Existing USTs must be equipped with release detection according to the schedule provided in state and federal regulations. New USTs must be equipped with release detection at the time of installation. By December 1990, pressurized piping must be equipped with an automatic line leak detector and be monitored by use of annual integrity testing or monthly monitoring using one of the automatic monitoring systems. Suction piping must be tightness tested every three years or be monitored monthly using one of the

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automatic monitoring systems, unless product drains back to the tank when the pump is shut off. The deadline for suction piping is the same as for the UST to which it is attached.

Automatic release detection methods are preferred in order to avoid labor costs and human error inherent in manual methods. New USTs are normally equipped with automatic release detection equipment; however until older USTs can be upgraded or replaced (December 1998 at the latest), manual methods must be utilized to comply with release detection requirements.

Manual release detection methods include Manual Tank Gauging and Inventory Control. Monthly Manual Tank Gauging may be used as the sole method of release detection only on USTs of 550 gallons or less. USTs of 551 to 2,000 gallons may use Monthly Manual Tank Gauging in place of Monthly Inventory Control, but must also be tightness tested annually. Monthly Inventory Control, combined with annual tank tightness testing, is the minimum release-detection requirement for all USTs over 2,000 gallons. These methods are further defined below:

1. MANUAL TANK GAUGING - must meet the following requirements:

a. Tank liquid level measurements are taken at the beginning and ending of a period of at least 36 hours during which no liquid is added to or removed from the tank.

b. Level measurements are based on an average of two consecutive stick readings at both the beginning and ending of the period.

c. The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch.

d. A leak is suspected and subject to release reporting requirements if the variation between beginning and ending measurements exceeds the weekly or monthly standards in the following table:

Nominal Tank Capacity	Weekly Standard (one test)	Monthly Standard (average of four tests)
-----------------------------	----------------------------------	--

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550 gal or less	10 gallons	5 gallons
551-1,000 gal	13 gallons	7 gallons
1,001-2,000 gal	26 gallons	13 gallons

Manual tank gauging should be performed in accordance with Appendix C, American Petroleum Institute Publication 1621, "Recommended Practice for Bulk Liquid Stock Control at Retail Outlets" (API 1621). The Manual Tank Gauging Record and Reconciliation Form contained in Appendix C should be used to record and analyze data collected. Copies shall be forwarded quarterly to the NTC Environmental Coordinator, (FAC3).

2. INVENTORY CONTROL - must be conducted monthly and be able to detect a release of at least 1 percent of flow-through plus 130 gallons on a monthly basis in the following manner:

a. Inventory volume measurements for deliveries, withdrawals, and the amount still remaining in the tank are recorded each operating day.

b. The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch.

c. The deliveries are reconciled with delivery receipts by measurement of the tank inventory before and after delivery.

d. Deliveries are made through a drop tube that extends to within one foot of the tank bottom.

e. Product dispensing is metered and recorded within the local standards for meter calibration, or an accuracy of 6 cubic inches for every 5 gallons of product withdrawn.

f. The measurement of any water level in the bottom of the tank is made to the nearest one-eighth of an inch at least once a month.

g. A leak is suspected and subject to release reporting requirements if the variation between the monthly beginning and

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ending measurements exceeds 1 percent of the month's flow-through plus 130 gallons.

Inventory control should be performed in accordance with Appendix C, American Petroleum Institute Publication 1621, "Recommended Practice for Bulk Liquid Stock Control at Retail Outlets" (API 1621). The Inventory Control Program Daily Reconciliation Form and the Inventory Control Program Monthly Reconciliation Worksheet contained in Appendix C should be used to record and analyze data collected. Copies shall be forwarded quarterly to the NTC Environmental Office (N45).

3. TANK TIGHTNESS TESTING - must be capable of detecting a 0.1 gallon per hour leak rate from any portion of the tank that routinely contains product, while accounting for the effects of the following:

- a. Thermal expansion or contraction of the product.
- b. Vapor pockets.
- c. Tank deformation.
- d. Evaporation or condensation.
- e. The location of the water table.

4. AUTOMATIC RELEASE DETECTION - acceptable methods include the following:

- a. Automatic tank gauging (not acceptable for piping).
- b. Vapor monitoring.
- c. Ground water monitoring.
- d. Interstitial monitoring.

#### **F. Corrosion Protection Requirements**

The current EPA regulations require regulated USTs and their piping to be protected against corrosion. This may be accomplished by cathodically protecting the metal, using non-corrodible material.

Most existing USTs and their piping are made of unprotected steel. In order to comply with the regulations, these USTs must be either upgraded by installation of cathodic protection or closed by December 1998. New USTs must be equipped with cathodic protection at the time they are installed. Cathodic protection is commonly provided using either galvanic anodes or impressed current. These are discussed below:

1. GALVANIC ANODES - cathodic protection using galvanic anodes is most commonly utilized on new tanks. In this case, magnesium or zinc anodes are attached to the tank at the factory. The magnesium or zinc will provide a small direct current, which is normally adequate to eliminate corrosion of the steel. If steel piping is used, anodes must also be applied to the piping. This is normally done in the field at the time of installation.

The voltages generated by galvanic anodes are not normally high enough to protect large areas of bare metal. Therefore, when galvanic anodes are used for cathodic protection, the metal to be protected must also be well coated to minimize contact between the metal and soil. This also makes retrofitting of existing tanks by installation of galvanic anodes difficult, because coatings on older USTs are normally in relatively poor condition.

Galvanic anode cathodic protection systems must be tested within 6 months of installation and every 3 years thereafter to assure they are functioning properly. These tests must be conducted by a qualified cathodic protection tester, as defined previously. Results of tests must be recorded and maintained in a location accessible for inspection by regulatory agencies. Appendix D contains a Cathodic Protection Test Record Form to be used in recording tests. Copies of test results shall be forwarded to the NTC Environmental Dept. (N45).

2. IMPRESSED CURRENT - cathodic protection using impressed current can be utilized on either new or existing USTs. In this case, a direct current is applied or "impressed" upon the steel of the UST and piping using a rectifier. Depending upon the condition of the tank's coating, the current can be increased until satisfactory protection is provided.

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Impressed current cathodic protection systems must be tested within 6 months of installation and every 3 years thereafter to assure they are functioning properly. These tests must be conducted by a qualified cathodic protection tester, as defined previously. Results of tests must be recorded and maintained in a location accessible for inspection by regulatory agencies. In addition, these systems must be inspected every 60 days to ensure that the equipment is running properly. These inspections need not be conducted by a certified tester, and normally consist of assuring that an indicator light is lit. Appendix D contains a Cathodic Protection Test Record Form and a Cathodic Protection Inspection Record Form to be used in recording tests and inspections. Copies of all test results shall be forwarded to the NTC Environmental Dept. (N45).

#### G. Spill Protection

The current EPA regulations require regulated USTs to be equipped with spill containment around the fill port. This is normally accomplished by use of a spill catchment basin around the fill port that will catch spills resulting when the fill hose is disconnected. The basin can be designed to either hold the fuel until removed or drain into the UST. There is currently no size requirement for the basin, but sizes normally range from 5 gallons to 15 gallons. In order to anticipate stricter regulations, it is recommended that the 15 gallon size be used on new and retrofitted USTs.

All existing regulated USTs must be equipped with spill protection by December 1998. All new regulated USTs must be equipped with spill protection at the time of installation. Spill protection is not required for USTs filled by transfers of less than 25 gallons at one time.

#### H. Overfill Protection

In addition to spill protection, the EPA regulations also require regulated USTs to be equipped with overfill protection. Overfill protection must consist of one of the following:

1. AUTOMATIC SHUTOFF DEVICE - must automatically shut off flow into the tank when the tank is no more than 95 percent full.

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2. OVERFILL ALARM - must alert the operator when the tank is no more than 90 percent full.

3. BALL FLOAT VALVE - must restrict flow into the tank when the tank is no more than 90 percent full.

All existing USTs must be equipped with overfill protection by December 1998. All new regulated USTs must be equipped with overfill protection at the time of installation. Overfill protection is not required on USTs fill by transfers of less than 25 gallons at one time.

#### I. REPAIR OF USTs

Repairs to USTs must be in compliance with the following requirements:

1. Repairs to UST systems must be properly conducted in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory.

2. Repairs to fiberglass-reinforced plastic tanks may be made by the manufacturer's authorized representatives or in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory.

3. Metal pipe sections and fittings that have released product as a result of corrosion or other damage must be replaced. Fiberglass pipes and fittings may be repaired in accordance with the manufacturer's specifications.

4. Repaired tanks and piping must be tightness tested in accordance with 40 CFR 280.43(c) and 280.44(b) within 30 days following the date of the repair unless the repaired portion is internally inspected or is equipped with an automatic monitoring system.

5. Within 6 months of the repair of any cathodically protected UST system, the cathodic protection system must be tested to ensure that it is operating properly.

6. The owner/operator must maintain records of each repair for the remaining operating life of the UST system that demonstrates compliance with the requirements listed above.

Copies of all test results shall be forwarded to the NTC Environmental Office (N45).

#### **J. Upgrading of Existing UST Systems**

Not later than 22 December, 1988 all existing UST systems must comply with one of the following requirements:

1. New UST system performance standards discussed in sections 4, 5, 6, and 7.

2. The new UST system upgrading requirements in the following sections.

3. The new UST system is removed or temporarily closed.

4. Steel tanks shall be upgraded by installing an internal lining and/or cathodic protection or replacement by fiberglass piping: and by installing spill and overfill equipment.

#### **K. Assessing the Site at Removal or Change-In-Service**

1. Before removal or change-in-service is completed, owners of UST systems must measure for the presence of a release through soil and ground water sampling or through the external release detection methods if installed.

2. If contaminated soils, contaminated ground water, or free product is discovered, corrective action must be initiated in accordance with all applicable Federal, state and local regulations.

#### **L. Closure of USTs**

The current EPA regulations specify the following requirements for temporary and permanent closure of regulated USTs:

1. TEMPORARY CLOSURE - When an UST system is temporarily closed, owners and operators must continue operation and

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maintenance of corrosion protection. Operation and maintenance of any release detection devices must be continued unless the UST system is emptied. Release reporting and abatement requirements still apply. The UST system is empty when all materials have been removed using commonly employed practices so that no more than one inch of residue or 0.3 percent of the total UST system capacity, by weight, remains in the system.

a. When a UST system is temporarily closed for 3 months or more, owners and operators must also comply with the following requirements:

(1) Leave vent lines open and functioning.

(2) Cap and secure all other lines, pumps, manways and ancillary equipment.

b. When a UST system is temporarily closed for more than 12 months, owners and operators must permanently close the UST system if it is not equipped with cathodic protection or constructed of, or coated with, fiberglass-reinforced plastic.

c. When a UST system is temporarily closed for more than 12 months, owners and operators must remove the UST system if it does not meet the performance standards of a new UST or the upgrading requirements (i.e. must be equipped with corrosion protection or have a lining installed). However, spill and overfill requirements do not have to be met. A one-year extension of this period can be requested of the State Fire Marshall. A site assessment must be performed and submitted with a written extension request within the initial 12-month temporary closure period.

2. PERMANENT CLOSURE - In order to properly close a regulated UST system, the owner/operator must perform the following tasks:

a. Notify IEPA at least 30 days prior to commencing closure.

b. Empty and clean the system by removing all liquids and accumulated sludges in accordance with API Publication 2015, "Cleaning Petroleum Storage Tanks".

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c. Remove the UST from the ground or fill it with an inert solid material in accordance with API Recommended Practice 1604, "Removal and Disposal of Used Underground Petroleum Storage Tanks".

d. Assess the site for contamination by obtaining and analyzing soil or ground water samples. Sampling is not required if vapor monitoring or ground water monitoring methods have been used for release detection at the UST system and have shown no contamination.

e. Follow the reporting and abatement requirements if contamination is found.

f. Maintain records that are capable of demonstrating compliance with the closure requirements. Results of the assessment of the excavation zone must also be maintained.

#### **M. Change-in-Service of UST Systems**

Changing the use of the tank to store different materials, abandoning the tank, removing the tank, etc., constitutes a change-in-service for the tank. Using a UST system to store even non-regulated substances (so that it is no longer classified as a UST system) is also considered a change-in-service. Before a change-in-service, the tank must be emptied, cleaned, and a site assessment must be conducted. This change-in-service may only occur during the first two years of use, commencing from the date of the tank installation. The State of Illinois must be notified of all change-in services.

#### **N. Release Response**

1. RELEASE REPORTING - the following conditions must be reported within 24 hours of occurrence and the indicated actions taken in the time frames specified:

a. Suspected Release - a release is suspected if any of the following conditions occur:

(1) Evidence of a release is found at the UST site or in the surrounding area (such as the presence of free product or vapors in soils, basements, sewer or utility lines, or nearby surface water).

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(2) Unusual operating conditions are observed (such as erratic behavior or product dispensing equipment, the sudden loss of product from the UST system, or an unexplained presence of water in the UST), unless system equipment is found to be defective but not leaking, and is immediately repaired or replaced.

(3) Monitoring results from a release detection method indicate a release may have occurred unless:

(a) The monitoring device is found to be defective, and is immediately repaired, recalibrated or replaced, and additional monitoring does not confirm the initial result; or

(b) In the case of inventory control, a second month of data does not confirm the initial result.

2. SPILLS AND OVERFILLS - A reportable spill or overfill has occurred if any of the following conditions occur:

a. The spill or overfill of petroleum exceeds 25 gallons;

b. The spill or overfill results in a visible sheen on nearby surface water.

c. The spill or overfill of a hazardous substance exceeds the reportable quantity under CERCLA (40 CFR 302).

3. RELEASE CONFIRMATION - If a release is suspected, one or both of the following must be performed within 7 days in order to confirm whether a release has occurred:

a. System Test - perform a tightness test of the system. If the system is not tight, the leaking portion must be repaired or replaced and corrective action taken to remediate the site. If the system is tight, but environmental contamination was the basis for suspecting a release, a Site Check must also be performed.

b. Site Check - measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations, and measurement

methods, owners and operators must consider the nature of the stored substance, the type of initial alarm or cause for suspicion, the type of backfill, the depth of ground water, and other factors appropriate for identifying the presence and source of the release. If the test results indicate that a release has occurred, corrective action must be taken to remediate the site.

4. CORRECTIVE ACTION - Owners and operators of petroleum or hazardous substance UST systems must, in response to a confirmed release from the UST system, comply with the following requirements:

a. Initial response - Within 24 hours perform the following:

(1) Report the release to Illinois Emergency Management Agency (IEMA), telephone no. (217) 782-7860.

(2) Report the release to Illinois Environmental Protection Agency (IEPA).

(3) Take action to prevent further release of the regulated substance into the atmosphere.

(4) Identify and mitigate fire, explosion and vapor hazards.

b. Initial Abatement Measures and Site Check - As soon as practicable, perform the following:

(1) Remove as much of the regulated substance from the UST system as is necessary to prevent further release to the environment.

(2) Visually inspect any above ground releases or exposed below ground releases and prevent further migration of the released substance into surrounding soils and groundwater.

(3) Continue to monitor and mitigate any additional fire and safety hazards posed by vapors or free products that have migrated from the UST excavation zone and entered into subsurface structures (such as sewers or basements).

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(4) Remedy hazards posed by contaminated soils that are excavated or exposed as a result of release confirmation, site investigation, abatement, or corrective action activities.

(5) Investigate to determine the possible presence of free product, and begin free product removal as soon as practicable.

(6) Within 20 days after release confirmation, submit a report to IEPA summarizing the initial abatement steps taken and any resulting information or data.

3. Site Cleanup - Following initial response, initial abatement measures and a site check, the owner/operator must perform various tasks in order to assess the site and perform a cleanup. The specific tasks can be found in 40 CFR 280.63 - 280.66, and are listed below:

- a. Initial Site Characterization.
- b. Free Product Removal.
- c. Investigations for soil and groundwater cleanup.

#### O. REPORTING

Owners and operators of regulated USTs must submit the following to IEPA at the times indicated:

a. Notification - Within 30 days after installation of a new UST, certifying the new UST complies with the requirements of 40 CFR 280 and Senate Bill No. 280, using the form contained in Appendix B.

b. Reports of Releases - Within 24 hours of the release, including suspected releases, spills/overfills, and confirmed releases.

c. Corrective Actions - Planned or taken, including initial abatement measures, initial site characterization, free product

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removal, investigation of soil and groundwater cleanup, and corrective action plan.

d. Notification - 30 days prior to closure or change-in-service of an UST, using the form in Appendix B. owners and operators must maintain documentation of the following:

- (1) Operation of Corrosion Protection Equipment - Copies of cathodic protection test and inspection forms;
- (2) UST System Repairs - Copies of contract documents and test results.
- (3) Compliance with Leak Detection Requirements - Copies of Inventory Control Record Forms, tank test results, and monthly readouts from automatic monitoring equipment.
- (4) Results of site investigation conducted at permanent closure.
- (5) All documentation will be retained until three years from the date a tank is permanently closed or it is removed, with copies sent quarterly to the NTC Environmental Office (N45).

## P. UST UPGRADING REQUIREMENTS

### 1. Cost Estimates

a. Retrofit of Existing UST - approximate costs for retrofitting an UST system (excluding engineering costs) are presented below:

(1) Leak Detection System	\$10,000-\$30,000/site
(2) Overfill Protection	\$5,000-\$7,000/site
(3) Spill Protection	\$3,000-\$6,000/UST
(4) Cathodic Protection	\$7,000-\$10,000/site
(5) Total for complete refit	\$25,000-\$52,000/UST

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b. UST Replacement- Approximate costs for installation of a new, double walled steel fiberglass-clad UST with spill and overfill protection, interstitial leak detection, liquid level inventory control monitoring and double walled fiberglass piping with interstitial monitoring and an automatic line leak detector (excluding engineering costs) are presented below:

<u>Tank Size (gal)</u>	<u>Approximate Cost</u>
300 - 3,000	\$20,000-\$30,000
4,000 - 6,000	\$35,000-\$40,000
7,000 - 10,000	\$40,000-\$50,000
11,000 - 17,000	\$55,000-\$60,000

c. UST Removal - Approximate costs for removal of UST, including 4 soil samples and no soil contamination (excluding engineering costs), are presented below:

<u>Tank Size (gal)</u>	<u>Approximate Cost</u>
300 - 3,000	\$4,000-\$6,000
4,000 - 6,000	\$6,500-\$8,000
7,000 - 10,000	\$9,000-\$11,000
11,000 - 17,000	\$12,000-\$15,000

d. Monitoring and Inspection - Approximate annual costs for inspecting various monitoring systems and conducting testing are presented below:

(1) Tank Tightness Testing	\$1,000-\$2,000/UST
(2) Inventory Control (manual)	\$1,000-\$2,000/UST
(3) Inventory Control (auto)	\$250-\$500/UST
(4) Inspection of Cathodic	\$500-\$1,000/UST

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2. Consideration of UST Age

a. Steel UST - The advantages of retrofitting vs. replacement of unprotected steel USTs of various ages are discussed below:

(1) Less than 15 years old - An unprotected steel UST less than 15 years old is likely to have enough wall thickness remaining to provide acceptable containment. If cathodic protection is added immediately, the tank should have a reasonable life expectancy. These tanks should be fully upgraded with cathodic protection, leak detection and spill/overfill protection as soon as possible.

(2) 15 to 25 years old - An unprotected steel UST of 15 to 25 years old is likely to have enough wall thickness remaining to provide acceptable containment. However, areas of pitting may be developing which will limit the life span of the tank. Addition of cathodic protection immediately would likely extend the life expectancy of this tank for the 10 year period before replacement is required. This tank should be upgraded with cathodic protection immediately and then replaced within ten years. However, addition of leak detection and spill/overfill protection should not be performed, as it would be less costly to perform manual inventory control combined with annual tightness testing until the tank is replaced.

(3) Over 25 years old - An unprotected steel tank of over 25 years is likely nearing the end of its life span. Depending upon the soil conditions and the quality of the coating applied to the tank, it is likely that the tank will fail within a few years even if cathodic protection is applied immediately. A tank of this age should be replaced as soon as possible. Until replacement occurs, manual inventory control combined with annual tightness testing should be performed.

(4) Fiberglass or Fiberglass-clad Steel UST - The age of a fiberglass or fiberglass-clad steel UST is of less importance than for an unprotected steel UST because corrosion is not a factor. Providing the tank was properly installed, it should last for many years. This tank should be fully upgraded with release detection according to the regulatory schedule, provided the tank

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and piping pass a tightness test. Spill/overfill protection should be installed at the same time as release detection.

### 3. Plan of Action

a. Recommended Plan of Action - A plan of action to meet regulatory deadlines for upgrading NTC, Great Lakes USTs in the most economical way is included as Appendix E. Required dates for action are shown in the column under each heading, while recommended dates for action are shown in the far right column.

b. When an action is recommended prior to the date upon which it is required, the recommended action is more economical than waiting until the deadline. If one type of upgrade (i.e. release detection) is required at a certain time, then all other required upgrades are also recommended at that time. According to the EPA regulations, installation of one of the leak detection methods does not eliminate the need for annual tightness testing until the UST has fully upgraded cathodic protection and spill/overfill protection installed.

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U S T INVENTORY					
NAVAL TRAINING CENTER GREAT LAKES					
BLDG.	FLUID	GAL.	TANK NO	PERMIT	REMARKS
1	#2DF	600	T-94-1-1	NA	1994 IN-COMPLNCE-NTC
106	#2DF	2,500	T-94-106-1	89100069	1994 IN-COMPLNCE-NTC
144	WO	600	T-94-144-1	NA	1994 IN-COMPLNCE-NTC
229	#2DF	12,500	23-T-2	WITHDRAWN	TO BE REMOVED-NTC
229	#2DF	12,500	23-T-3	WITHDRAWN	TO BE REMOVED-NTC
229	WO	1,000	23-T-1	NA	TO BE REMOVED-NTC
239	#2DF	20,000	23-T-4	89100075	TO BE REMOVED-NTC
239	#2DF	20,000	23-T-5	89100075	TO BE REMOVED-NTC
239	FW	3,100	5-85-1-W	NA	NON-REGULATED-NTC
239	FW	5,300	5-85-2-W	NA	NON-REGULATED-NTC
324	#2DF	3,600	23-T-7	NA	TO BE REMOVED-NTC
324	#2DF	3,600	23-T-8	NA	TO BE REMOVED-NTC
324	#2DF	3,600	23-T-10	NA	TO BE REMOVED-NTC
324	WO	3,600	23-T-9	NA	TO BE REMOVED-NTC
325	WO	6,000	B325OWT	89100068	FIX TO BE IN-COMPLNCE
329	#2DF	2,209	23-T-12	NA	TO BE REMOVED-NTC
329	#2DF	2,209	23-T-21	NA	TO BE REMOVED-NTC
329	WO	500	23-T-24	NA	TO BE REMOVED-NTC
2710	GAS	15,000	T95-2710-A	89100076	1995 IN-COMPLNCE-NTC
2710	GAS	12,000	T95-2710-B	89100076	1995 IN-COMPLNCE-NTC
2710	GAS	12,000	T95-2710-C	89100076	1995 IN-COMPLNCE-NTC
2912		1,000	2912A	NA	REMOVED- 7-28-97
3216	#2DF	4,000	T-94-3213-1	NA	1994 IN-COMPLNCE-NTC
3216	GAS	4,000	T-94-3213-2	NA	1994 IN-COMPLNCE-NTC
3216	WO	400	3216-B1		REMOVED-5-13-97
103	GAS		10-T-2		REMOVED 10-8-97
103	GAS		10-T-3		REMOVED 10-8-97
103	GAS		10-T-4		REMOVED 10-8-97
103	KER		10-T-6		REMOVED 10-8-97
104A	#2DF		10-T-5		REMOVED 10-8-97
11	#6DF	1,000	11-T-9	NA	REMOVED 10-9-97
1600A	GAS	10,000	12M-T-1	89100080	REMOVED- 9-17-97
1600A	GAS	10,000	12M-T-2	89100080	REMOVED- 9-17-97
1600A	#2DF	6,500	12M-T-3	89100080	REMOVED- 9-17-97
200H	#2DF	5,000	31-T-1	89100079	ABANDONED IN PLACE
1506	WO	600	12M-T-5	NA	INUSE INCOMPLNCE-PWC
3223			12M-T-4	PROCESS TANK	IN USE NON-RELTD-PWC
239	WO	1,000	23-T-29	NA	IN USE TBR- NTC
200H	#2DF	5,000	31-T-3		INSTALLED 1997
LEGEND		TOTAL USTs=27(NTC=24,PWC=2,HOSP=1)			
DF = DIESEL FUEL		IN-COMPLIANCE=10(NTC=8,PWC=1,HOSP=1)			
GAS = GASOLINE		NON-COMPLIANCE=1(NTC=1)FIX TO BE IN-COMPLIANCE			
WO = WASTE OIL		UST'S TBR=13(NTC=13)			
TBR = TO BE REMOVED		REGULATED=24(NTC=22,PWC=1,HOSP=1)			
KER = KEROSENE		NON-REGULATED=3(NTC=2,PWC=1			
UKT = UNKNOWN TANKS		IR = INSTALLATION RESTORATION			
JUL 20,1998					
USTINVT.R.XLS					

25	WO	1016	3-286-1	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
25	LO	500	3-384-0	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
25	WO	6000.00	8325OWT	89100068	U	1985	FE	DU	DU	STEEL	NO	19-Nov-92	PASSED
25	SA	500.00	23-T-27	NA	A	DU	FBR	DU	DU	DU	DU	NA	NA
25	LO	1215.00	2-323-2-F	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
	LO	1215.00	2-323-4-F	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
	WO	300.00	51/2-362-2-F	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
	DF	447.00	2-344-2-F	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
26	#2DF	211507.00	8326TK	89100071	A	DU	FE	40.0FT	30.0FT	STEEL	DU	NA	NA
29	#2DF	2209.00	23-T-12	NA	U	1983	FE	DU	5.3 FT	STEEL	NO	13-Oct-92	FAILED
29	#2DF	2209.00	23-T-21	NA	U	1988	FE	DU	5.3 FT	STEEL	NO	13-Oct-92	PASSED
29	WO	500.00	23-T-24	NA	U	1980	FE	DU	DU	STEEL	DU	19-Nov-92	PASSED
329	#2DF	500.00	1-493-1-A	NA	A	1985	FE	DU	DU	DU	DU	NA	NA
329	#2DF	500.00	1-493-1-B	NA	A	1983	FE	DU	DU	DU	DU	NA	NA
329	#2DF	500.00	1-493-1-C	NA	A	1985	FE	DU	DU	DU	DU	NA	NA
329	WO	250.00	1-76-1-F	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
329	WO	250.00	1-76-2-F	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
329	FW	300.00	87-91-B	NA	A	1987	FE	DU	DU	STEEL	DU	NA	NA
329	FW	300.00	87-92-B	NA	A	1987	FE	DU	DU	STEEL	DU	NA	NA
329	WO	125.00	99-1-F	NA	A	1985	FE	FE	9.25 FT	4.0 FT	STEEL	DU	NA
329	LO	750.00	D55-10	NA	A	1986	FE	FE	9.25 FT	4.0 FT	STEEL	DU	NA
329	LO	750.00	D55-09	NA	A	1986	FE	FE	9.25 FT	4.0 FT	STEEL	DU	NA
329	H2O	22000.00	329-1-H2O	NA	A	DU	FE	DU	DU	STEEL	NO	NA	NA
329	H2O	1072.00	329-2-H2O	NA	A	DU	FE	DU	DU	DU	DU	NA	NA
912	PER	8679.00	912A	NA	A	DU	FE	DU	DU	DU	DU	NA	NA
914	#2DF	200.00	21-T-14	NA	A	DU	FE	DU	DU	DU	DU	NA	NA
933	DF/GAS	250TW	T95-933-1	NA	A	1995	DFE	4'6"	11.00	N/A	NA	NEW	NEW
1405	#2DF	200.00	1405-EG-1	NA	A	1986	FE	2.0'	5.0'	STEEL	NA	NA	NA
1410	PRO	9000.00	1410-P-1	NA	A	1990	FE	3.0 FT	6.3 FT	STEEL	DU	NA	NA
1410	PRO	9000.00	1410-P-2	NA	A	1990	FE	3.0 FT	6.3 FT	STEEL	DU	NA	NA
1410	CO2	25000.00	1410-1-CO2	NA	A	1990	DU	19.0 FT	6.3 FT	COPPER	DU	NA	NA
1410	WW	133000.00	1410-1-WW	NA	A	1990	CONC	DU	DU	DU	DU	NA	NA
1410	WW	133000.00	1410-2-WW	NA	A	DU	DU	DU	DU	DU	DU	NA	NA
1410	WW	133000.00	1410-3-WW	NA	A	DU	DU	DU	DU	DU	DU	NA	NA
2110	WO	250.00	2110A	NA	A	1992	FE	5.0 FT	4.0 FT	DU	NO	NA	NA
2110	WO	250.00	2110B	NA	A	1992	FE	5.0 FT	4.0 FT	STEEL	DU	NA	NA
2710	GAS	15.000	T95-2710-A	89100076	U	1995	FPG	29.0R	10.5R	FPG	N/A	N/A	NEW
2710	GAS	12.000	T95-2710-B	89100076	U	1995	FPG	24.0R	10.8	FPG	N/A	N/A	NEW
	GAS	12.000	T95-2710-C	89100076	U	1995	FPG	24.0R	10.5R	FPG	N/A	N/A	NEW
	DU	1000.00	2912A	NA	U	1970	FE	DU	DU	DU	NO	NA	NA
3213	#2DF	4000.00	T-94-3213-1	NA	U	1994	FPG	20.0FT	8.0FT	FPG	N/A	JAN 94	NEW
	GAS	4000.00	T-94-3213-2	NA	U	1994	FPG	20.0FT	8.0FT	FPG	N/A	JAN 94	NEW
3311	DF/GA	TW250	T95-3311-1	NA	A	1995	DFE	4'6"	11.0'	N/A	N/A	NEW	NEW
BLD523	LO	37.00	2135.00	NA	A	1996.00	FE	24"	36"	N/A	N/A	AST	N/A
BLD523	LO	37.00	2160.00	N/A	A	1996.00	FE	24"	36"	N/A	N/A	AST	N/A
BLD510	PROP	12000.00	T-95PRP-1	N/A	A	1995.00	FE	9'	28'	FE	N/A	AST	NEW
BLD510	PROP	12000.00	T-95PRP-2	N/A	A	1995.00	FE	9'	28'	FE	N/A	AST	NEW
BLD510	AFF	6008.00	510-AFF	N/A	A	1996.00	FPG	8FT	16FT	FPG	N/A	AST	NEW
LEGEND													
A = ABOVEGROUND				U = UNDERGROUND				O/W = OIL/WATER MIXTURE (HOLDING TANK)					
NA = NOT APPLICABLE				DU = DATA UNKNOWN				PER = PERCHLOROETHYLENE STORAGE					
DF = DIESEL FUEL				FO = FUEL OIL				FE = STEEL TANK (NO CATHODIC PROTECTION)					
GAS = GASOLINE				KER = KEROSENE				FPG/FE = FIBERGLASS LINED STEEL TANK					
SA = SULFURIC ACID				PRO = PROPANE				CP = CATHODIC PROTECTION ON PIPING					
SH = SODIUM HYDROXIDE				LO = LUBE OIL				GAL/HR = TANK TEST LEAK RATE					
WO = WASTE OIL				WW = WASTE WATER				FW = FEEDWATER					
H2O = WATER				OS = OUT OF SERVICE				SW = SUPPLY WATER TO FFTD					
FPG = FIBERGLASS				CO2 = CARBON DIOXIDE				WW = WASTE WATER FROM FFTD					
ALK = ALKALI				CONC = CONCRETE				DFE = DOUBLE WALLED STEEL					
*IDENTIFIES ACTIVITY OR STAFF CIVIL ENG. DESIGNATED NUMBERS								TW=DUAL TANK SELF ENCLOSED					

INVENTORY													
LINE NO.	ITEM	QTY	UNIT	DESCRIPTION	STATUS	DATE	TYPE	SIZE	THICKNESS	WELD	TEST	DATE	RESULT
1	#2DF	600.00	T-94-1-1	NA	U	1994	FPG	8.0FT	4.0 ft	FPG	NO	JAN94	PASSED
13	GAS	1875.00	13-T-1	NA	A	1993	DFE	DU	DU	STEEL	YES	NA	NA
106	#2DF	2500.00	T-94-106-1	89100069	U	1994	FPG	22.0FT	8.0FT	FPG	NO	JAN94	PASSED
130	#2DF	150.00	21-T-15	NA	A	DU	FE	DU	DU	DU	DU	NA	NA
144	WO	600.00	T-94-144-1	NA	U	1994	FPG	6.0FT	4.0FT	FPG	NO	JAN94	PASSED
220	ALK	4200.00	220-1-A	NA	A	DU	FE	DU	DU	DU	NO	JAN94	PASSED
229	#2DF	12500.00	23-T-2	WITHDRAWN	U	1963	FE	DU	DU	STEEL	CP	NA	NA
229	#2DF	12500.00	23-T-3	WITHDRAWN	U	1963	FE	DU	DU	STEEL	CP	NA	NA
229	WO	1000.00	23-T-1	NA	U	1963	FE	DU	DU	STEEL	CP	NA	NA
229	WO	700.00	23-T-13	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
229	WO	460.00	23-T-14	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
229	WO	1000.00	23-T-15	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
229.00	H2O	4000.00	23-T-18	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
229	H2O	4000.00	23-T-19	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
229	H2O	35000.00	23-T-20	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
229	LO	500.00	23-T-16	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
229	LO	1400.00	23-T-17	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
236	LO	317.00	159-1-F	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
236	LO	317.00	159-2-F	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
236	LO	317.00	159-3-F	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
236	LO	317.00	158-1-F	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
236	LO	317.00	158-2-F	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
236	LO	317.00	158-3-F	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
238	#2DF	318.00	238-1-F	NA	A	1978	DU	6.0 FT	3.0 FT	STEEL	DU	NA	NA
238	LO	564.00	238-1-LO	NA	A	1978	DU	6.0 FT	3.0 FT	STEEL	DU	NA	NA
238	LO	658.00	238-2-LO	NA	A	1978	DU	7.0 FT	4.25 FT	STEEL	DU	NA	NA
239	#2DF	18748.00	23-T-4	89100075	U	1973	FE	DU	10.0 FT	STEEL	NO	19-Oct-92	PASSED
239	#2DF	18748.00	23-T-5	89100075	U	1973	FE	DU	10.0 FT	STEEL	NO	19-Oct-92	PASSED
239	#2DF	12000.00	23-T-1A	89100075	A	DU	FE	10.0FT	13.9 FT	DU	NO	NA	NA
239	#2DF	12000.00	23-T-1B	89100075	A	DU	FE	12.5FT	10.9 FT	DU	NO	NA	NA
239	WO	2000.00	23-T-29	NA	A	1980	FE	6.3 FT	12.8 FT	DU	NO	NA	NA
239	WO	517.00	23-T-6	NA	A	DU	FE	6.0 FT	3.0 FT	DU	NO	NA	NA
239	#2DF	500.00	4-101-2	NA	A	DU	FE	5.25 FT	2.0 FT	DU	NO	NA	NA
239	#2DF	1000.00	4-96-2	NA	A	DU	FE	6.0 FT	3.0 FT	DU	NO	NA	NA
239	LO	1000.00	4-112-1	NA	A	DU	FE	6.0 FT	5.25 FT	DU	NO	NA	NA
239	LO	125.00	4-100-2	NA	A	DU	FE	1.5 FT	3.0 FT	DU	NO	NA	NA
239	LO	1000.00	3-103-1-F	NA	A	DU	FE	5.0 FT	4.0 FT	DU	NO	NA	NA
239	LO	1000.00	3-105-1-F	NA	A	DU	FE	5.0 FT	4.0 FT	DU	NO	NA	NA
239	FW	3100.00	5-85-1-W	NA	U	DU	FE	DU	DU	DU	NO	NA	NA
239	FW	5300.00	5-85-2-W	NA	U	DU	FE	DU	DU	DU	NO	NA	NA
239	FW	33908.00	239-1-W	NA	A	DU	FE	25.0 FT	15.0 FT	DU	NO	NA	NA
239	FW	1950.00	3-93-3-W	NA	A	DU	FE	6.5 FT	4.5 FT	DU	NO	NA	NA
239	FW	1950.00	3-98-1-W	NA	A	DU	FE	6.5 FT	4.5 FT	DU	NO	NA	NA
239	WO	1000.00	1000 CONT TK	NA	U	1973	FE	DU	DU	DU	NO	NA	NA
324	#2DF	3600.00	23-T-7	NA	U	1947	FBG/FE	DU	5.3 FT	STEEL	NO	19-Nov-92	PASSED
324	#2DF	3600.00	23-T-8	NA	U	1947	FBG/FE	DU	5.3 FT	STEEL	NO	15-Oct-92	PASSED
324	#2DF	3600.00	23-T-10	NA	U	1947	FBG/FE	DU	5.3 FT	STEEL	NO	16-Oct-92	FAILED
324	WO	3600.00	23-T-9	NA	U	1947	FE	DU	5.3 FT	STEEL	NO	16-Oct-92	FAILED
325	#2DF	747.00	3-240-1-F	NA	A	DU	FE	DU	DU	STEEL	NO	NA	NA
325	#2DF	747.00	3-240-2-F	NA	A	DU	FE	DU	DU	STEEL	NO	NA	NA
325	#2DF	447.00	2-381-1-F	NA	A	DU	FE	DU	DU	STEEL	NO	NA	NA
325	#2DF	447.00	2-384-2-F	NA	A	DU	FE	DU	DU	STEEL	NO	NA	NA
325	#2DF	350.00	2-276-2-I	NA	A	DU	FE	DU	DU	STEEL	NO	NA	NA
325	LO	1501.00	3-278-2-F	NA	A	DU	FE	DU	DU	STEEL	NO	NA	NA
325	LO	1217.00	3-272-2-F	NA	A	DU	FE	DU	DU	STEEL	NO	NA	NA
325	LO	1163.00	3-286-2-F	NA	A	DU	FE	DU	DU	STEEL	NO	NA	NA
325	LO	883.00	2-316-2-F	NA	A	DU	FE	DU	DU	STEEL	NO	NA	NA
325	LO	883.00	2-316-4-F	NA	A	DU	FE	DU	DU	STEEL	NO	NA	NA
325	LO	883.00	2-316-6-F	NA	A	DU	FE	DU	DU	STEEL	NO	NA	NA
325	LO	272.00	3-236-1-F	NA	A	DU	FE	DU	DU	STEEL	NO	NA	NA
325	LO	272.00	3-236-2-F	NA	A	DU	FE	DU	DU	STEEL	NO	NA	NA
325	WO	1649.00	5 1/2-341-2-F	NA	A	DU	DU	DU	DU	STEEL	NO	NA	NA
325	WO	1247.00	5 1/2-292-2-F	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
325	WO	435.00	47GTM	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
325	WO	457.00	5-222-0-F	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
325	WO	360.00	7MRC	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
325	WO	111.00	5-290-2-F	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
325	#2DF	16890.00	5-204-1-F	89100068	A	DU	FE	19.0FT	18.0FT	STEEL	DU	NA	NA
325	#2DF	16890.00	5-204-2-F	89100068	A	DU	FE	19.0FT	18.0FT	STEEL	DU	NA	NA
325	#2DF	25629.00	5-260-1-F	89100068	A	DU	FE	DU	DU	STEEL	DU	NA	NA
325	#2DF	25629	5-260-2-F	89100068	A	DU	FE	DU	DU	STEEL	DU	NA	NA
325	LO	175	2-258-1	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
325	LO	175	2-258-2	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA
325	WO	1360	3-278-1	NA	A	DU	FE	DU	DU	STEEL	DU	NA	NA

# Notification for Underground Storage Tanks

OFFICE USE ONLY

- A separate form must be used for each site.
- If you have more than five tanks, photocopy pages 1-5 and attach to this notification form.
- Please type, or print in ink; the signature under "certification" (section IX) must be signed in ink.

ID NUMBER

DATE RECEIVED

Facility I.D. # (if known) \_\_\_\_\_

Owner I.D. # (if known) \_\_\_\_\_

## TYPE OF NOTIFICATION

☐ New Facility ☐ Amended (Changes/Corrections/Additional Tanks) Mark all that apply:

- \_\_\_\_\_ Owner Address Change (this facility only)
- \_\_\_\_\_ Owner Address Change (all facilities owned)
- \_\_\_\_\_ New Owner
- \_\_\_\_\_ Tank(s) Removed (Permit # \_\_\_\_\_)
- \_\_\_\_\_ Other \_\_\_\_\_
- \_\_\_\_\_ Tanks Relined (Permit # \_\_\_\_\_)
- \_\_\_\_\_ Tanks Installed (Permit # \_\_\_\_\_)
- \_\_\_\_\_ Tanks Upgraded/Repaired (Permit # \_\_\_\_\_)
- \_\_\_\_\_ Abandonment Notice (Permit # \_\_\_\_\_)

## I. Ownership of Tank(s)

## II. Location of Tank(s)

Owner Name (Corp., Individual., Public Agency or other Entity)

Facility Name or Company Site Identifier, as applicable

Mailing Address

Street Address or State Road, as applicable (exact address)

City State Zip

City State Zip

County

County

Contact Name

(Area Code) Phone

Contact Name

(Area Code) Phone

## III. TYPE OF OWNERSHIP (mark all that apply)

☐ Current Owner of Tanks  
Date Purchased \_\_\_\_\_

☐ Ownership Uncertain \_\_\_\_\_

☐ Former Owner

☐ Other \_\_\_\_\_

## IV. TYPE OF FACILITY

Type of Facility: (Circle correct code)

A. Service Station

G. Industrial/Manufacturing

M. City/Town

B. Bulk Plant

H. Private Institution

N. County

C. Petroleum Distributor

I. Residence (Non-Farm)

O. State

D. Convenience Store

J. Farm

P. Federal (Military)

E. Auto Dealer

K. Airport

Q. Federal (Non-Military)

F. Commercial/Retail

L. Marina

R. School District

S. Port District

T. Utility District

U. Fire Dept.

V. Other Special

Service Districts

W. Other

(Please Specify)

# **VI. Description of Underground Storage Tanks (Complete entire column for each tank)**

Tank Identification Number	Tank No. ____	Tank No. ____	Tank No. ____	Tank No. ____	Tank No. ____
<b>1. Material of Construction</b> (mark all that apply)					
Asphalt coated or bare steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cathodically protected steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dielectric coated steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Composite (steel with fiberglass)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fiberglass reinforced plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lined interior	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Double-walled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Secondary containment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steel STI-P3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify)	_____	_____	_____	_____	_____
<b>2. Piping Materials</b> (mark all that apply)					
Bare steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Galvanized steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fiberglass reinforced plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cathodically protected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Double-walled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Secondary containment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dielectric coating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify)	_____	_____	_____	_____	_____
<b>3. Piping Type</b> (mark all that apply)					
European suction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
American suction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pressure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gravity feed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify)	_____	_____	_____	_____	_____

# **VII. Certification of Compliance** (Complete for all new, upgraded and relined tanks at this location).

## **Installation** (mark all that apply)

- Installer certified by tank and piping manufacturers
- Installer certified or licensed by implementing agency
- Installer registered by implementing agency
- Installer is the owner of the tank(s)
- Installation inspected by a registered engineer
- Installation inspected & approved by implementing agency
- Manufacturer's installation checklists have been completed
- Another method allowed by state agency (please specify)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**OATH:** I certify the information that is provided in section VII is true to the best of my knowledge, and certify that the installation was performed in accordance with all applicable state and federal laws and regulations. (THIS SECTION MAY ONLY BE COMPLETED BY THE CONTRACTOR. SEPARATE OATH MUST BE SUBMITTED FOR EACH ACTIVITY PERFORMED BY DIFFERENT CONTRACTOR.)

Tank No. \_\_\_\_\_

Permit No. \_\_\_\_\_

Contractor: \_\_\_\_\_

Name

Signature (must be original)

Date

Position

Company

## **VIII. Financial Responsibility**

Mark all that apply:

☐ Self-Insurance

☐ Guarantee

☐ Certificate of Deposit

☐ Commercial Insurance

☐ Surety Bond

☐ Trust Fund

☐ Risk Retention Group

☐ Letter of Credit

☐ Other Method Allowed

(please specify) \_\_\_\_\_

## **IX. Certification (Read and sign after completing all sections)**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

Name and official title of owner or owner's authorized representative (print)

Signature (must be original)

Date Signed

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## INSTRUCTIONS FOR THE INVENTORY CONTROL PROGRAM DAILY RECONCILIATION FORM

At the end of each day, a tank reconciliation should be performed as follows:

Note: Enter all values as gallons unless indicated otherwise.

### Book Inventory

1. Read all dispenser meters to determine Closing for each hose and enter on lines 1-10 under the appropriate product column. Add all meter readings from hoses selling the same product (lines 1-10) to determine Total Meters (line 11).
2. Enter any dispenser meter readings from old meters removed on line 12.
3. *Subtract* Enter any dispenser meter readings from newly installed meters on line 13.
4. Enter any product used to conduct a dispenser calibration test, if the product is not returned to the storage tank, on line 14. Add line 12 to line 11 and subtract lines 13 and 14 from the sum and enter the result on line 15.
5. Enter today's Opening Meters (previous day's Closing Meters) (line 16) from today's Total Closing Meters (line 15) and enter the result on lines 17 and 26.

### Physical Inventory

1. Carefully gauge each tank and enter inches of product in each in the appropriate product column on lines 18 and 21. See Appendix C for gauging procedures.
2. Enter inches of water in each tank in the appropriate product column on lines 19 and 22.
3. Convert all inches to gallons using the tank conversion chart supplied with the tank and record gallons next to the inches figures on the appropriate lines.
4. Subtract line 19 from 18 and line 22 from 21 and enter the results on lines 20 and 23 respectively.
5. If a single product is stored in two tanks that are interconnected (that is, product flows freely between two tanks) add lines 20 and 23 and enter the result on lines 24 and 29.
6. If a product is stored in a single tank, enter the result on line 20 and on line 29.

### Tank Reconciliation

1. Enter Physical Inventory from previous day (line 29 of previous day's form) on line 25.
2. Enter today's Product Receipts received on line 27.
3. Subtract line 26 from line 25 and add line 27 to the result to determine Inventory Balance (line 28).
4. Subtract line 29 from line 28. If the result is negative, enter it on line 30. If the result is positive, enter it on line 31.
5. Enter values on line 30 and/or 31 on the Inventory Control Program Monthly Reconciliation Worksheet.

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## INVENTORY CONTROL PROGRAM MONTHLY RECONCILIATION WORKSHEET

DATE: \_\_\_\_\_

LOCATION: \_\_\_\_\_

LINE	DAILY OVERAGE/SHORTAGE (GALLONS)				
	DAY	REGULAR LEADED	REGULAR UNLEADED	PREMIUM UNLEADED	DIESEL
	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				
	20				
	21				
	22				
	23				
	24				
	25				
	26				
	27				
	28				
	29				
	30				
	31				
1	CUM OVER TOTAL				
2	% THRU				
3	CUM SHORTAGE TOTAL				
4	% THRU				

ATTENTION: THE CUMULATIVE SUM OF MONTHLY OVERAGES OR SHORTAGES SHOULD NOT EXCEED 0.5% OF MONTHLY THROUGHPUT.

SEE INSTRUCTIONS ON REVERSE SIDE

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24 JAN 1992							REGULATORY REQUIREMENTS AND PLAN OF ACTION				STORAGE TANKS		NAVAL TRAINING CENTER, GREAT LAKES		PLAN OF ACTION/STATUS	
TANK ID NO.	RELEASE DETECTION REQUIRED	AUTOMATIC LINES LEAK DETECTION REQUIRED	CATHODIC PROTECTION REQUIRED	SPILL/OVRFL. PROTECTION REQUIRED	REMOVAL AND CLOSURE REQUIRED											
21-T-1	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REPLACE	
21-T-2	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REPLACE	
21-T-3	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REPLACE	
21-T-6	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REPLACE	
21-T-7	DEC 92	DEC 92	DEC 98	DEC 98	NONE										RETROFIT	
21-T-8	DEC 91	DEC 91	DEC 98	DEC 98	NONE										REPLACE	
21-T-9	DEC 91	DEC 91	DEC 98	DEC 98	NONE										REMOVE	
21-T-10	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REMOVE	
21-T-11	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REPLACE	
21-T-12	DEC 91	DEC 91	DEC 98	DEC 98	NONE										REPLACE	
21-T-13	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REPLACE	
23-T-1	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REMOVE	
23-T-1A	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REMOVE	
23-T-1B	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REPLACE	
23-T-2	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REPLACE	
23-T-3	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REPLACE	
23-T-4	DEC 91	DEC 91	DEC 98	DEC 98	NONE										REPLACE	
23-T-5	DEC 91	DEC 91	DEC 98	DEC 98	NONE										REPLACE	
23-T-6	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REMOVE	
23-T-7	DEC 89	DEC 89	DEC 98	DEC 98	NONE										RETROFIT	
23-T-8	DEC 89	DEC 89	DEC 98	DEC 98	NONE										RETROFIT	
23-T-9	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REPLACE	
23-T-10	DEC 89	DEC 89	DEC 98	DEC 98	NONE										RETROFIT	
23-T-11	DEC 92	DEC 92	DEC 98	DEC 98	NONE										REPLACE	
23-T-12	DEC 93	DEC 93	DEC 98	DEC 98	NONE										RETROFIT	
23-T-21	DEC 93	DEC 93	DEC 98	DEC 98	NONE										RETROFIT	
23-T-24	DEC 93	DEC 93	DEC 98	DEC 98	NONE										REPLACE	
23-T-28	DEC 93	DEC 93	DEC 98	DEC 98	NONE										REPLACE	
23-T-29	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REPLACE	
B325OWT	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REPLACE	
3224	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REMOVE	
3225	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REMOVE	
3305B	DEC 89	DEC 89	DEC 98	DEC 98	NONE										REMOVE	

SEP 22 1998

REGULATORY REQUIREMENTS AND PLAN OF ACTION UNDERGROUND TANKS TENANTS AND ACTIVITIES									
TANK ID NO.	RELEASE DETECTION REQUIRED	AUTOMATIC LEAK DETECTION REQUIRED	CATHODIC PROTECTION REQUIRED	SPILL/OVRFL PROTECTION REQUIRED	REMOVAL AND CLOSURE REQUIRED	PLAN OF ACTION / STATUS			
10-T-2	NO	NO	NO	NO	DEC 89	ABANDONED AND REMOVE			
10-T-3	NO	NO	NO	NO	DEC 89	ABANDONED AND REMOVE			
10-T-4	NO	NO	NO	NO	DEC 89	ABANDONED AND REMOVE			
10-T-5	NO	NO	NO	NO	DEC 89	ABANDONED AND REMOVE			
10-T-6	NO	NO	NO	NO	DEC 89	ABANDONED AND REMOVE			
11-T-7	NO	NO	NO	NO	DEC 89	ABANDONED AND REMOVE			
11-T-8	NO	NO	NO	NO	DEC 89	ABANDONED AND REMOVE			
11-T-9	DEC 93	DEC 93	NO	DEC 98	NONE	REPLACE			
12M-T-1	DEC 91	DEC 91	DEC 98	DEC 98	NONE	REPLACE			
12M-T-2	DEC 91	DEC 91	DEC 98	DEC 98	NONE	REPLACE			
12M-T-3	DEC 91	DEC 91	DEC 98	DEC 98	NONE	REPLACE			
12M-T-4	DEC 89	DEC 89	DEC 98	DEC 98	NONE	REPLACE			
31-T-1	DEC 93	DEC 93	DEC 98	DEC 98	NONE	RETROFIT			
31-T-2	DEC 89	DEC 89	DEC 98	DEC 98	NONE	REPLACE			

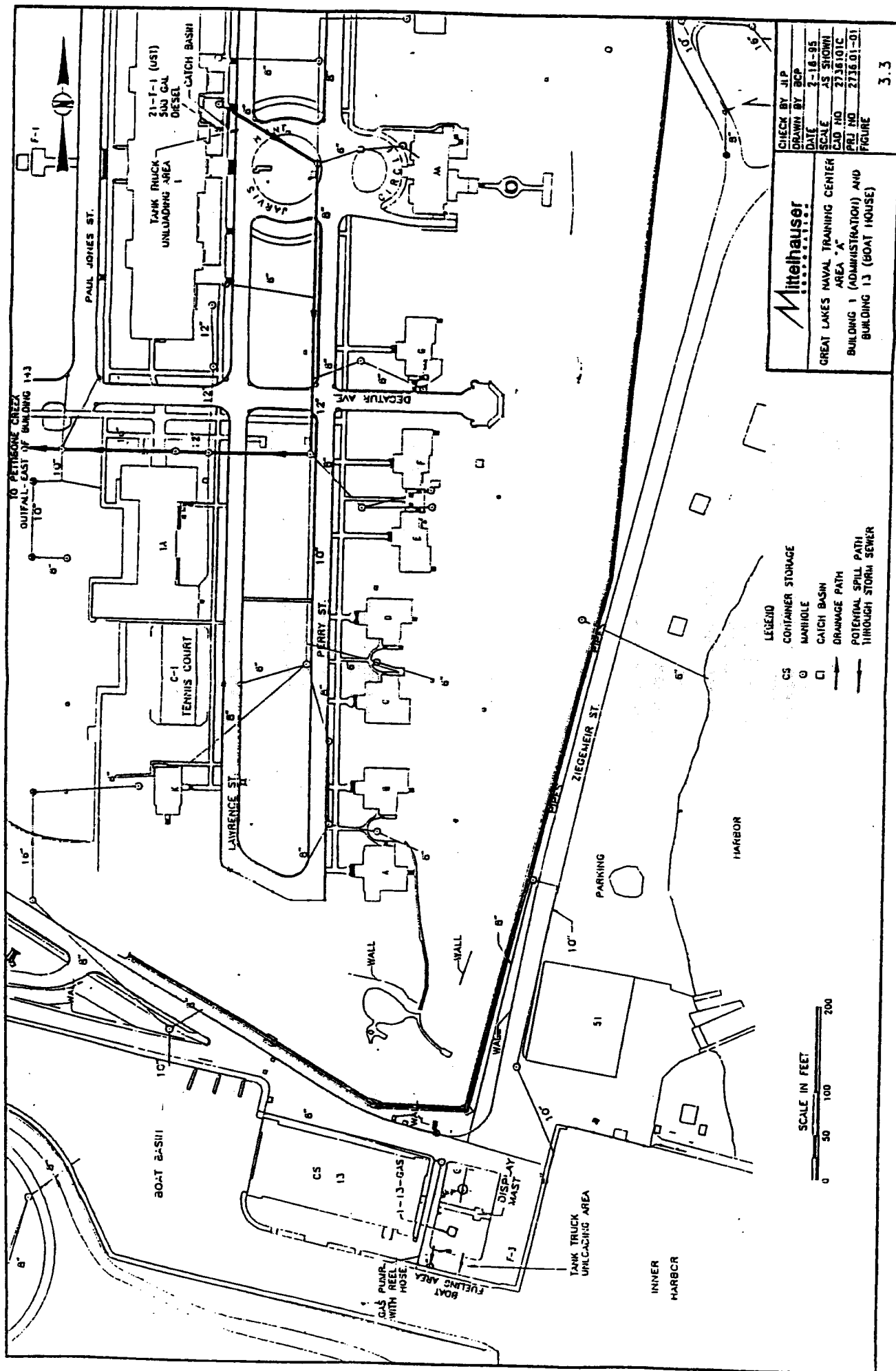
# STORAGE TANK SURVEY FORM

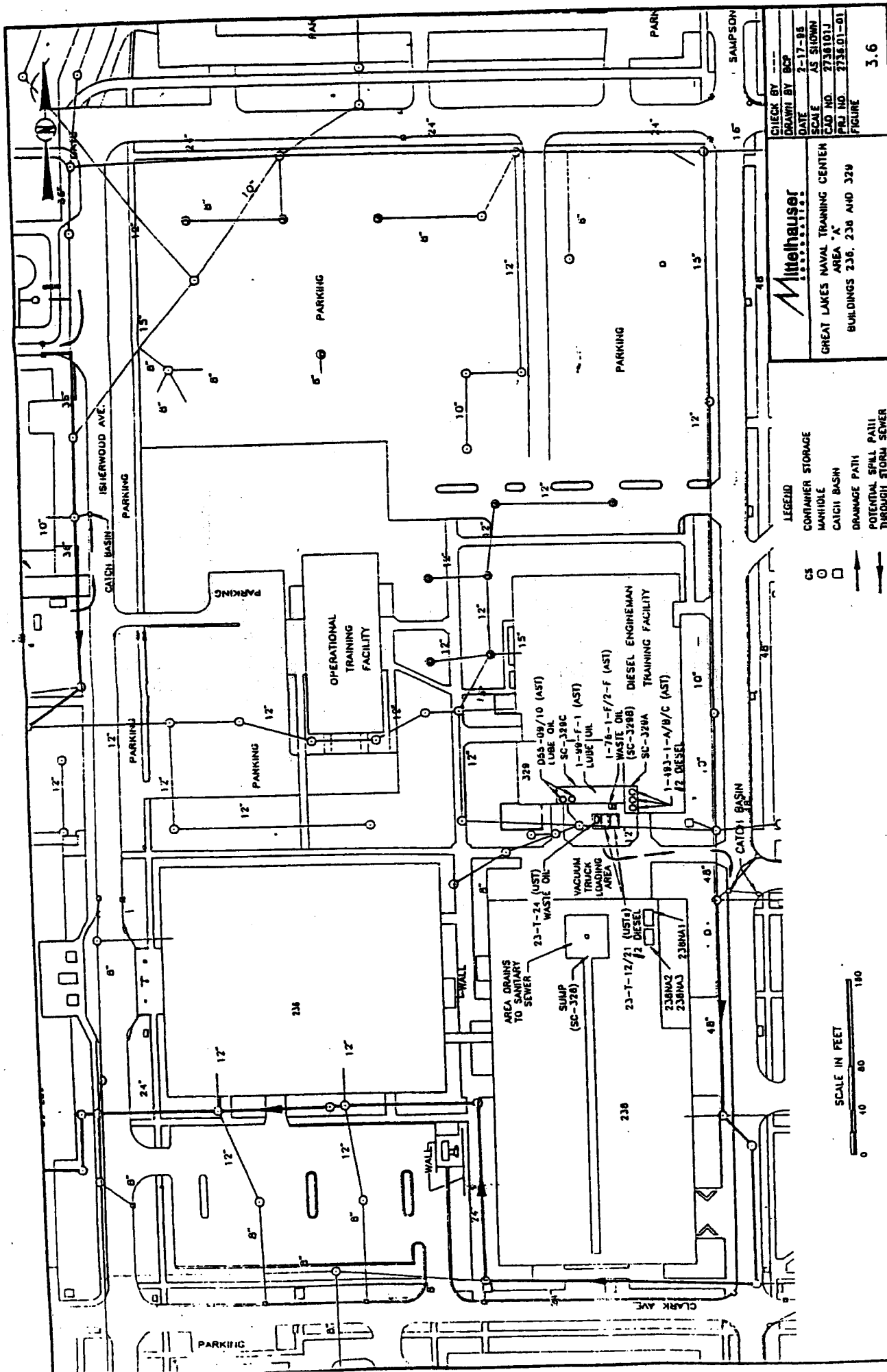
Date of Survey \_\_\_\_\_ By \_\_\_\_\_  
Activity Name \_\_\_\_\_ UIC \_\_\_\_\_  
Building Name \_\_\_\_\_ Bldg No. \_\_\_\_\_  
Person to Contact \_\_\_\_\_ Phone No. \_\_\_\_\_

## Description of Storage Tank

Tank Number \_\_\_\_\_ Location \_\_\_\_\_  
Year Installed \_\_\_\_\_ Estimated Age (Years) \_\_\_\_\_  
Capacity (Gal) \_\_\_\_\_  
Length \_\_\_\_\_ Diameter \_\_\_\_\_ Height \_\_\_\_\_  
Presently used (Y/N) \_\_\_\_\_ If no, last year used \_\_\_\_\_  
Temporarily out of use \_\_\_\_\_ Permanently out of use \_\_\_\_\_  
Present material stored \_\_\_\_\_  
Previously material stored \_\_\_\_\_  
Quantity presently in tank (gal) \_\_\_\_\_  
Abandoned tank filled with inert materials \_\_\_\_\_ Type \_\_\_\_\_  
Repairs on tank (Y/N) \_\_\_\_\_ Date of last repair \_\_\_\_\_  
Type repair \_\_\_\_\_  
(attach record of repair documentation and submit with survey)  
Tank Material \_\_\_\_\_ Tank Construction (Steel, etc) \_\_\_\_\_  
Primary containment Material \_\_\_\_\_  
Internal Protection Material \_\_\_\_\_  
External Protection Material \_\_\_\_\_  
Supply Pipe Material \_\_\_\_\_ Size \_\_\_\_\_ Cathodic Prot \_\_\_\_\_  
Return Pipe Material \_\_\_\_\_ Size \_\_\_\_\_ Cathodic Prot \_\_\_\_\_  
Vent Pipe Material \_\_\_\_\_ Size \_\_\_\_\_ Cathodic Prot \_\_\_\_\_  
Leak Detection Type (Visual, wells, Sensors, etc) \_\_\_\_\_  
Construction Drawing Numbers \_\_\_\_\_

Remarks \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_





Mittelhauser  
INCORPORATED

GREAT LAKES NAVAL TRAINING CENTER  
AREA "A"  
BUILDINGS 236, 238 AND 328

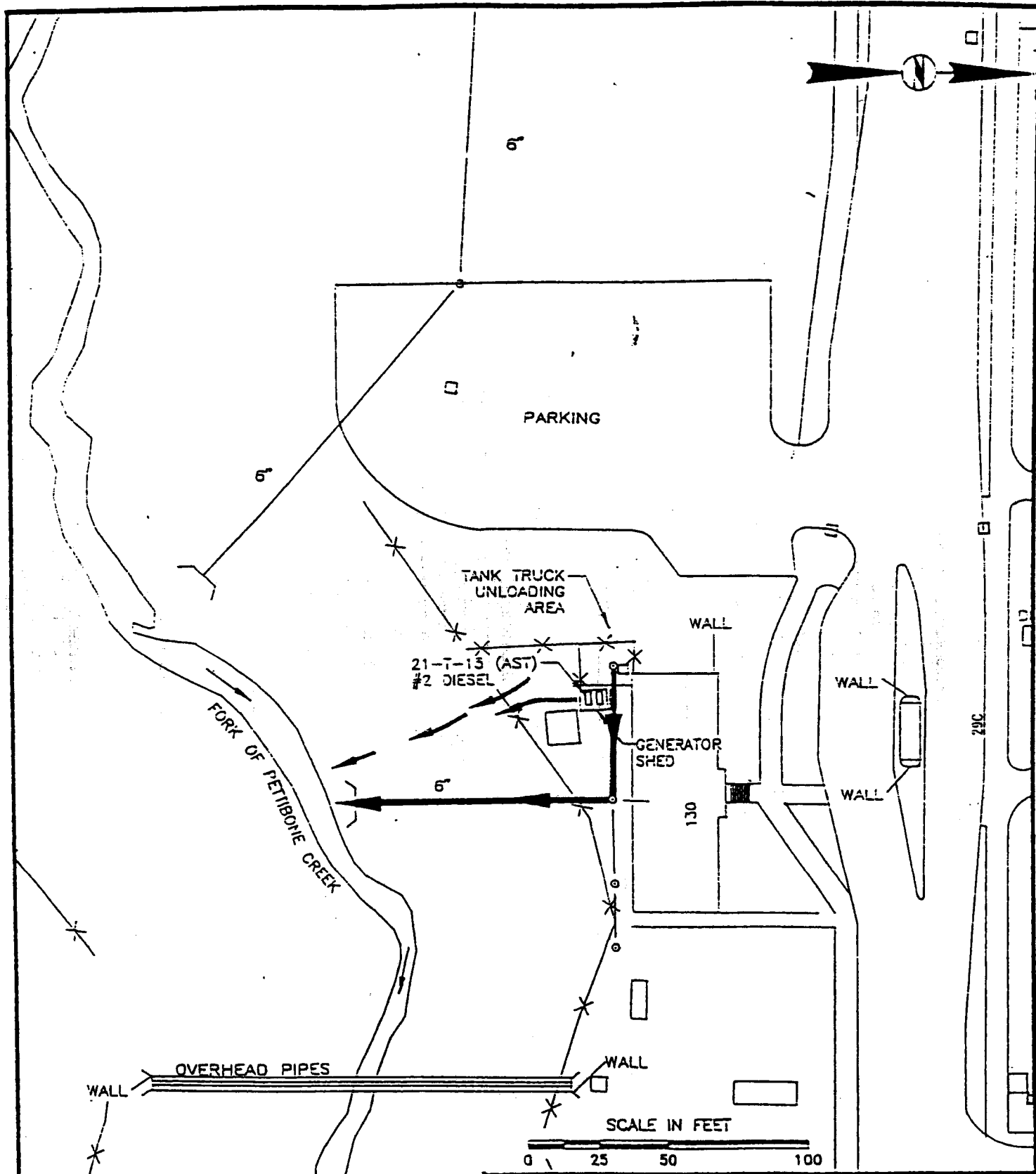
LEGEND  
CONTAINER STORAGE  
MANHOLE  
CATCH BASIN  
DRAINAGE PATH  
POTENTIAL SPILL PATH  
THROUGH STORM SEWER

CS  
O  
□  
→  
→

SCALE IN FEET  
0 40 80 160

CHECK BY	BCP
DRAWN BY	AS SHOWN
DATE	2-17-95
SCALE	AS SHOWN
CAD NO.	27381011
PLU NO.	2738-01-01
FIGURE	3.6





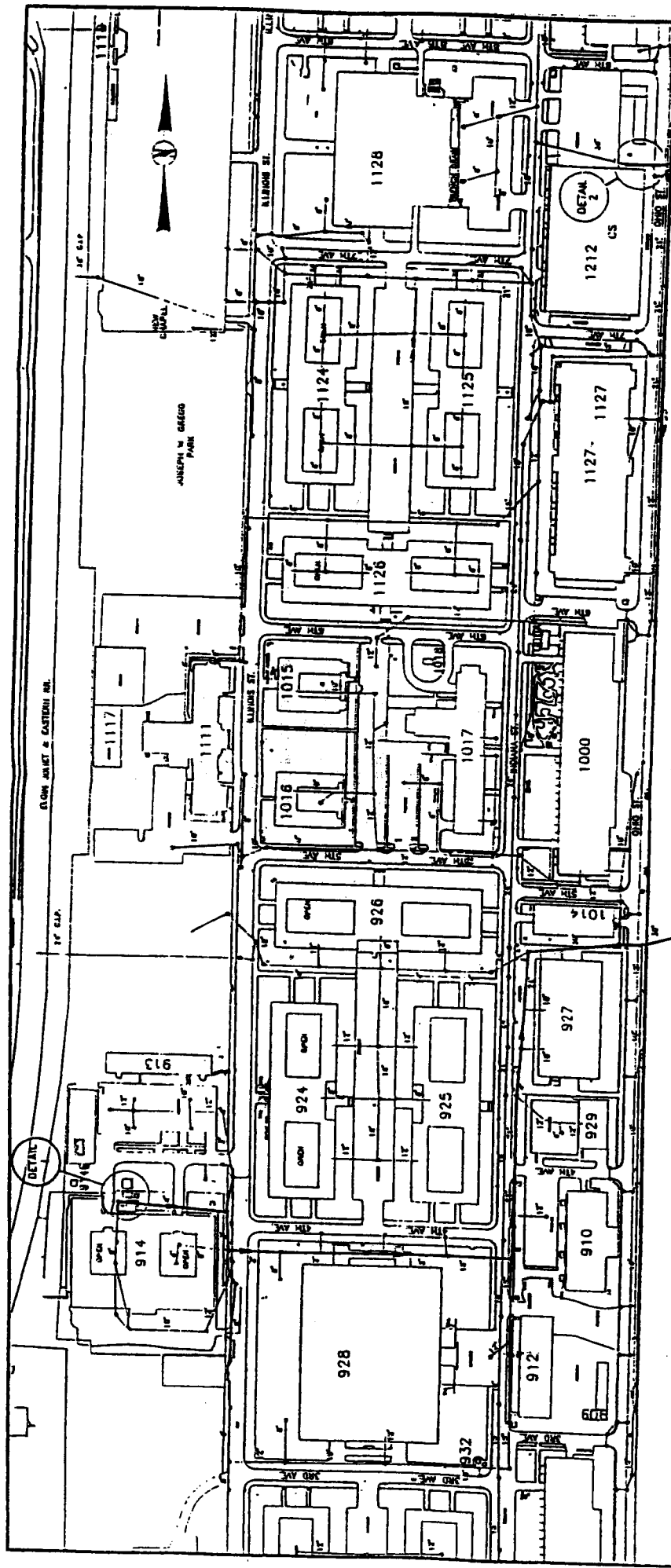
# LEGEND

- CS CONTAINER STORAGE
- MANHOLE
- CATCH BASIN
- ↙ DRAINAGE PATH
- ➔ POTENTIAL SPILL PATH THROUGH STORM SEWER

**Mittelhauser**  
CORPORATION

GREAT LAKES NAVAL TRAINING CENTER  
AREA "A"  
BUILDING 130

CHECK BY	
DRAWN BY	BCP
DATE	2-17-95
SCALE	AS SHOWN
CAD NO.	27361010
PRJ NO.	2736.01-01
FIGURE	3.8



LEGEND

CS CONTAINER STORAGE

○ MANHOLE

□ CATCH BASIN

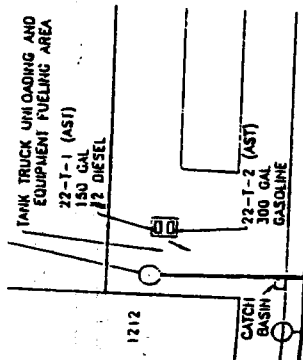
TO PETTIBONE CREEK

SCALE IN FEET

0 100 200 400

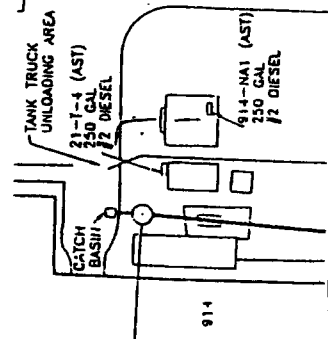
DETAIL 2

SCALE: 1" = 50'



DETAIL 1

SCALE: 1" = 50'

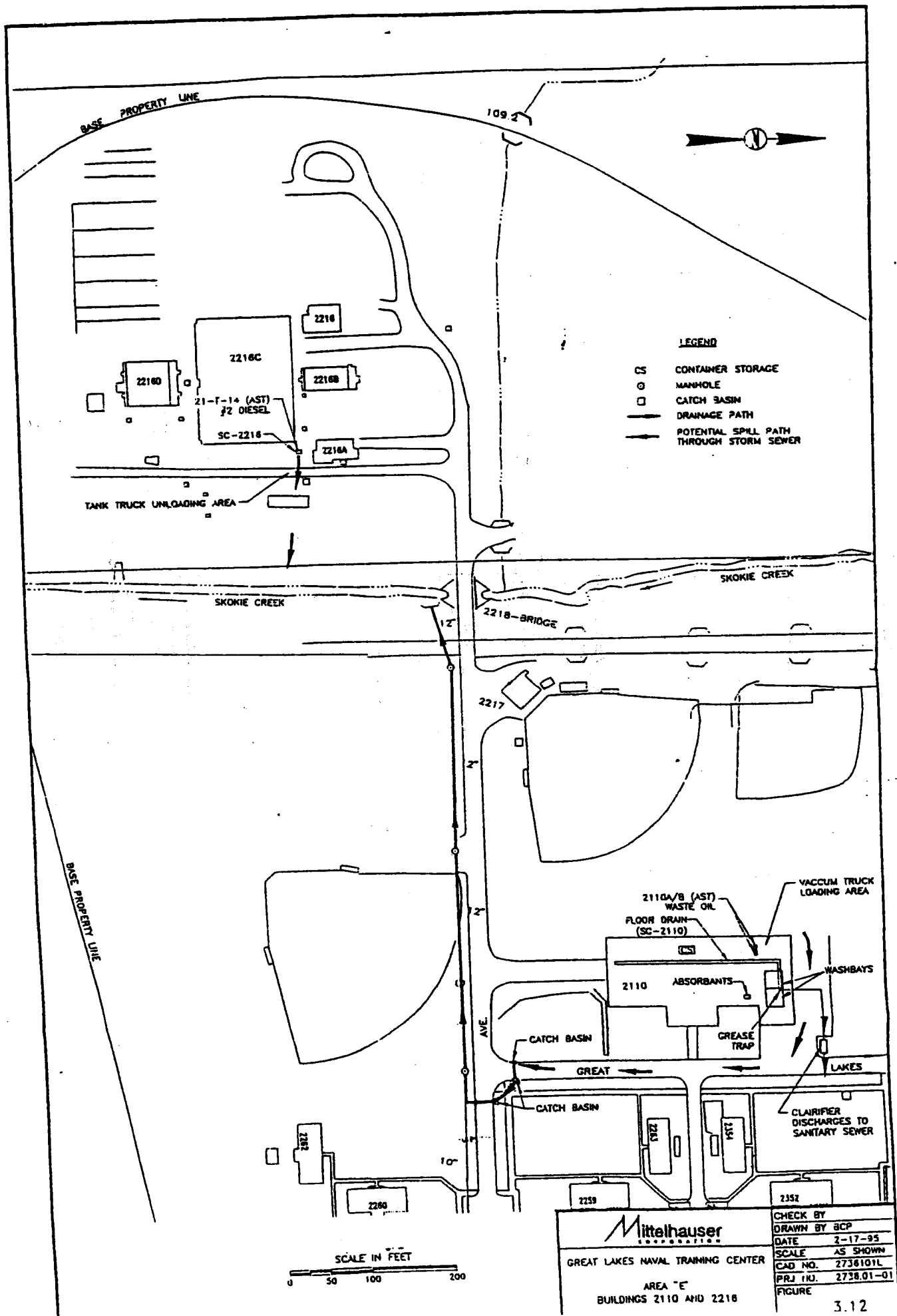


<b>Mittelhauser</b>	
CHECK BY	BCP
DRAWN BY	2-17-95
DATE	AS SHOWN
SCALE	27351016
CAD NO.	2736 81-01
FIG. NO.	FIGURE
3.9	

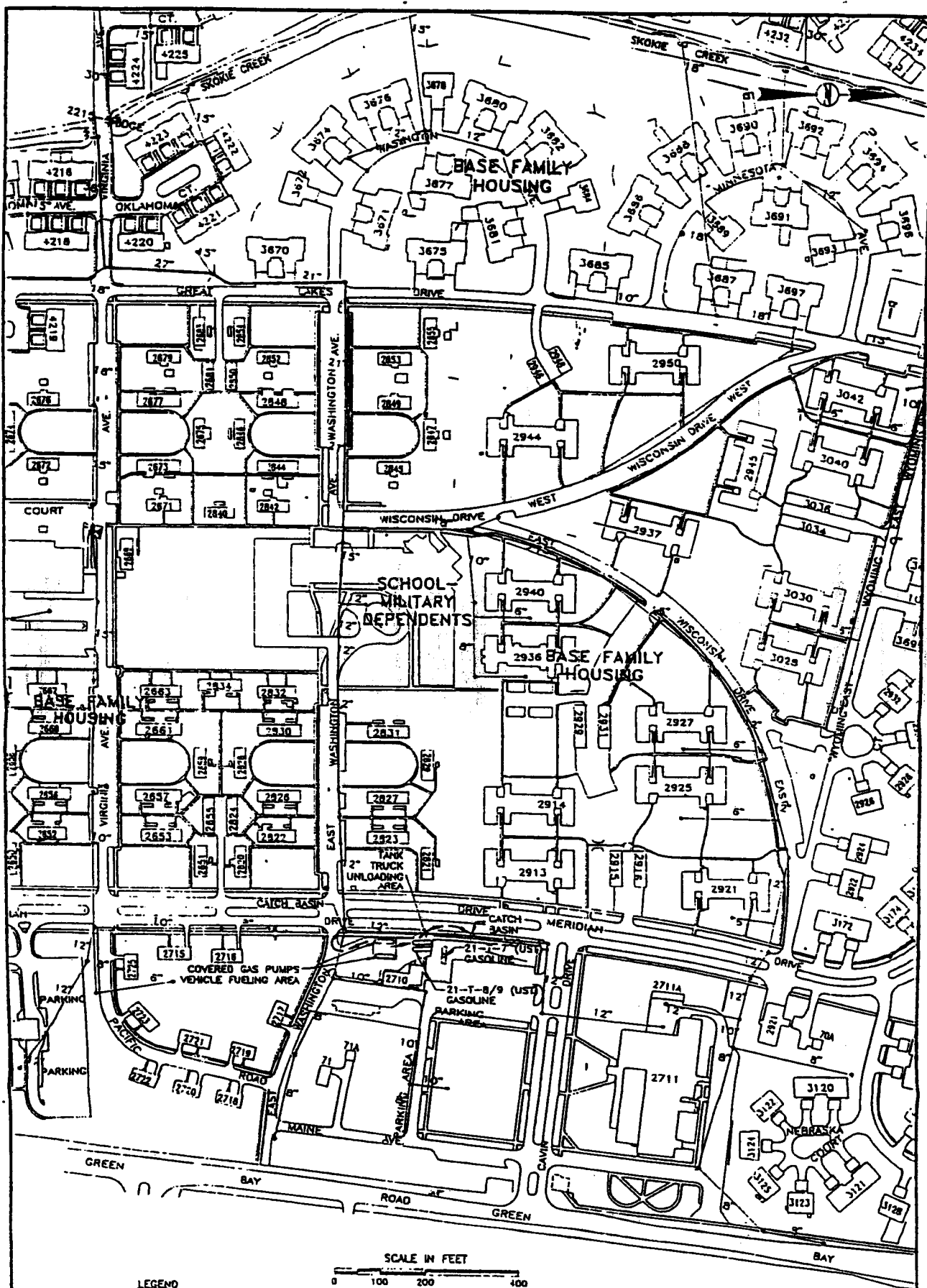
GREAT LAKES NAVAL TRAINING CENTER

AREA "B"

BUILDINGS 914 AND 1212




<b>Mittelhauser</b> GREAT LAKES NAVAL TRAINING CENTER AREA "E" BUILDINGS 2110 AND 2218		CHECK BY
		DRAWN BY BCP
		DATE 2-17-95
		SCALE AS SHOWN
		CAD NO. 2736101L
PRJ NO. 2738.01-01		FIGURE 3.12



# LEGEND

- u CATCH BASIN
- o MANHOLE
- DRAINAGE PATH
- POTENTIAL SPILL PATH THROUGH STORM SEWER

SCALE IN FEET  
0 100 200 400

 GREAT LAKES NAVAL TRAINING CENTER  AREA "E" BUILDING 2711	CHECK BY
	DRAWN BY BCP
	DATE 2-17-95
	SCALE AS SHOWN
	CAD NO. 2738101M
	PRJ NO. 2738.01-01
	FIGURE

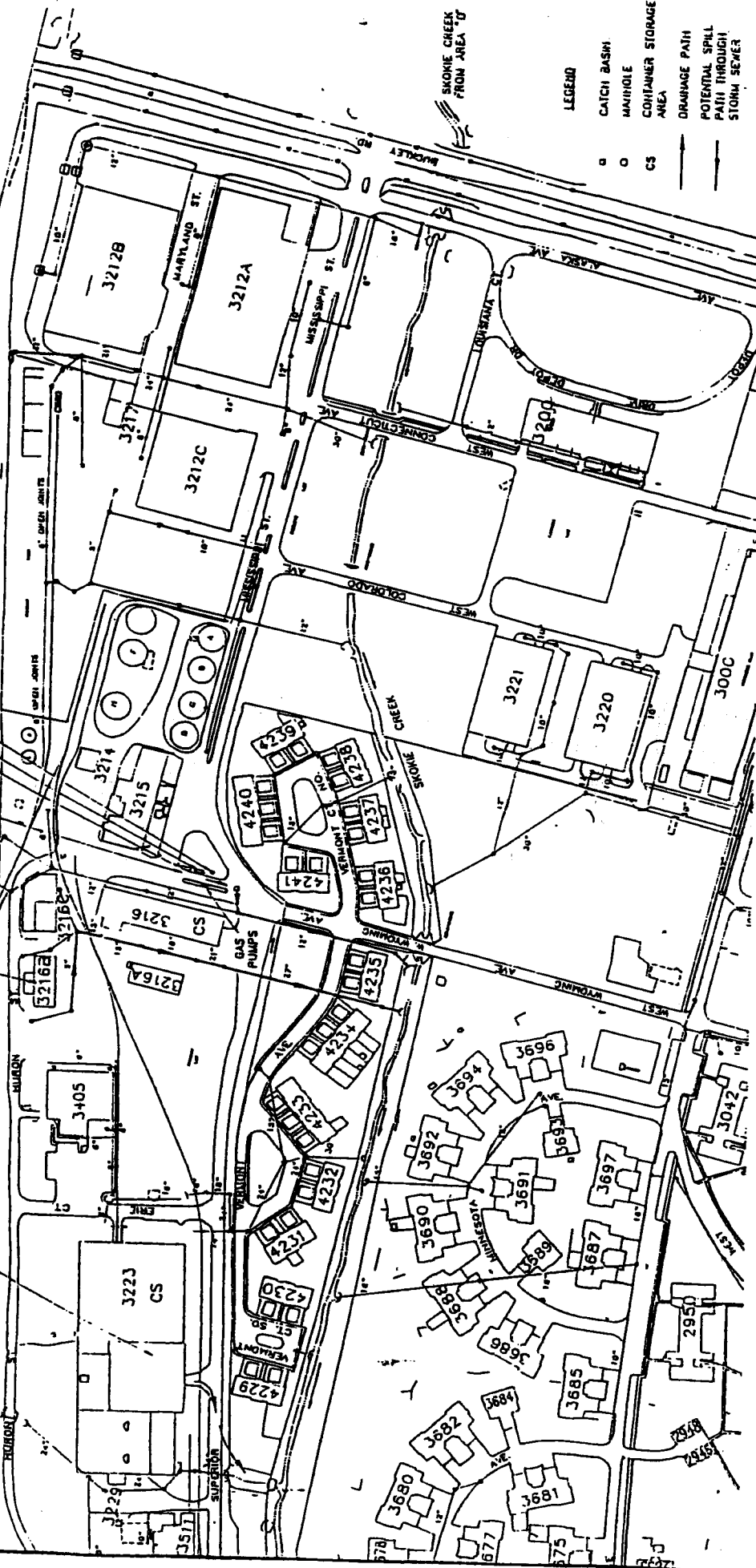


1-94-3213-1 (UST)  
#2 DIESEL  
1-94-3213-2 (UST)  
GASOLINE  
3218-MA1 (AST)  
GASOLINE  
(SC-3218)

VEHICLE FUELING  
AND TANK TRUCK  
UNLOADING

EXPORT FROM CONTAINMENT  
AREA FOR TRANSFER

12M-T-4 (UST)  
SPILL CONTAINMENT TANK



# LEGEND

- CATCH BASIN
- MANHOLE
- CONTAINER STORAGE AREA
- DRAINAGE PATH
- POTENTIAL SPILL PATH THROUGH STORM SEWER
- SKOKIE CREEK FROM AREA 'D'

Mittelhauser

CHECK BY  
DRAWN BY BCP  
DATE 2-17-95  
SCALE AS SHOWN  
CUD NO. 2738101N  
PREJ NO. 2738.01-01  
FIGURE 3.14

SCALE IN FEET  
0 100 200 400

AREA 'E'  
BUILDINGS 3216, 3218B, 3223  
AND AREA 3213

U.S. NAVAL TRAINING CENTER

